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ABSTRACT

This paper reports on the evaluation of six pilot programs conducted in four Texas school districts to provide summer and after-school instruction for 2,084 students. The programs are described in terms of commonalities--cost, morale, transportation; and differences or contrasts--scheduling, cost, student identification, program philosophy, methods of instruction. An overview of the six programs is given in tabular form, with additional information in an appendix. Strengths and weaknesses of each are then presented. Guidelines for evaluation are also discussed. Four of the programs were based on instruction in a laboratory or field studies setting; the others featured instruction in learning centers and classroom settings. Enrichment instruction was the focus of five of the six programs, while the major emphasis of all six was on motivation and improving student attitudes toward the study of science and mathematics. In a brief conclusion, it is recommended that state funds be appropriated so that mathematics and science instructional improvement can become a reality in all school districts in Texas. (MNS)

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State Board of Education

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Texas Education Code [13.117(e)]
January 1985

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Interim Commissioner of Education

December 8, 1984

To the Honorable Governor of Texas, Lt. Governor,
and Sixty-Ninth Legislature:

The enclosed Evaluation Report on Pilot Programs for Summer and After-School Instruction in Science and Mathematics is respectfully submitted for your consideration. This report is required by Section 13.117(e) of the Texas Education Code.

Section 13.117(c) authorized the Commissioner of Education to select school districts of various types to conduct pilot program studies to determine the most effective models for implementation of summer programs and after-school studies for science and mathematics. No appropriation was made for the pilot programs; therefore, there were no special funds available to assist participating school districts. During the 1984-85 biennium, six pilot programs were conducted.

Sufficient quantitative information to make determinations concerning the impact of the programs on student achievement was not available from participating districts. With the major emphasis of the programs on motivation and improving student attitudes toward the study of science and mathematics, districts chose less formal evaluation procedures. However, each district indicated that the programs had a favorable impact on student achievement. Student, teacher, and community attitudes concerning the programs were positive.

The supplemental models presented in this report can be replicated in other areas of the state, but budgetary restraints prevent most districts from participating.

Respectfully submitted,

Jon Brumley

Jon Brumley, Chairman
State Board of Education

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EXECUTIVE SUMMARY

Evaluation Report on Pilot
Programs for Summer and After-School Instruction
in Science and Mathematics (TEC 13.117)

During the 1984-85 biennium, six pilot programs were conducted through four school districts. The purpose of the programs was to provide more and better quality science and mathematics instruction through summer and after-school instruction.

Program Description

The pilot programs provided additional instructional time for 2,084 students through a variety of instructional arrangements and settings. The length of time for the programs varied from two weeks to two and one-half months over the summer. The one before- and after-school program operated throughout the regular school year.

Four of the programs were based upon instruction in a laboratory or field studies setting. The other programs featured instruction in learning centers and classroom setting. Enrichment instruction was the focus of five of the programs.

Fiscal Data

No appropriation was made for the pilot programs; therefore, there were no special funds available to assist participating school districts. School districts reported local expenditures of $246,322. In addition, $26,842 in federal funds were expended for one program. Cost per student is inconclusive because of the wide variation of student time spent in one of the programs and the donation of various facilities, services, and equipment. Per student cost estimates for the projects ranged from $10 to $325.

Findings

Sufficient quantitative information to make determinations concerning the impact of the programs on student achievement was not available from participating districts. With the major emphasis of the programs on motivation and improving student attitudes toward the study of science and mathematics, districts chose less formal evaluation procedures. However, each district indicated that the programs had a favorable impact on student achievement.

Community attitudes and support for the programs were positive. This was demonstrated via speakers, volunteers, and donations. However, more efforts in this area appear necessary since tuition charges were prohibitive for some of the students.

Student and teacher attitudes concerning the programs were positive. The opportunity for each to concentrate on a single subject and to work in a more individualized instructional setting heightened their enthusiasm, self-confidence, and understanding of each other.

Since most of the programs were away from the home campus, dependence on bus transportation or transportation by the parents caused some problems with attendance, discipline, and finances.

Poor communication and coordination between the program staff, the home school, volunteers, and parents was a reported hindrance to the effectiveness of some programs.

Conclusion

If the identified state need to provide more and better mathematics and science programs is to become a reality in all school districts, state funds should be appropriated. The supplemental models presented in this report can be replicated in other areas of the state, but budgetary restraints prevent most districts from participating.

INTRODUCTION

House Bill 1147 of the 68th Texas Legislature authorized action toward improvement of science and mathematics instruction in the state. The bill directed the Commissioner of Education to select school districts of various types to conduct pilot programs. The programs were to determine the most effective models for providing more and better quality science and mathematics instruction through summer and after-school instruction. School districts were encouraged to use supplemental contracts for science and mathematics teachers. The goal was to expand the opportunity for remedial, regular, and gifted and talented students to have more time on task. However, no appropriation was made for the pilot programs. Therefore, there were no special funds available to assist the school districts that volunteered to participate during the 1984-85 biennium.

In November 1983, school administrators were informed by a letter from the Commissioner of Education of the new law. Texas Education Agency staff assistance was offered to any interested school district having an existing program meeting the provisions of the law and the State Board of Education rules or to any school district that would like to develop a new program. School administrators interested in participating were to submit program descriptions to the Agency for approval by January 6, 1984.

Although several school districts expressed interest in participating, they were unable to do so because of budgetary restraints and the lack of special funds to assist them. Generally, the pilot programs submitted were programs that were already operating in the school districts.

The Commissioner approved projects from major metropolitan districts of 20,000 or more ADA as well as from a smaller, rural district of 6,000 ADA. Students who participated were in kindergarten through Grade 12. All levels--elementary, middle school, and high school--were represented. Students in the regular course of study as well as gifted and talented students participated in the pilot programs. In all, there were 2,084 students who benefited from the programs. The length of time for the instruction varied from two weeks to two and one-half months over the summer.

The one before- and after-school program operated throughout the school year. Districts used their discretion as to providing supplemental enrichment or remedial approaches.

Texas Education Agency staff met with interested school districts in April 1984 at Region XI and Region XX Education Service Centers to explain and discuss pilot program guidelines and the evaluation process and to offer technical assistance. Agency staff provided follow-up information and technical assistance via telephone conferences, correspondence, and on-site visits to the programs.

DESCRIPTION OF PILOT PROGRAMS

COMMONALITIES

- COST--Students in all but one program paid tuition fees ranging from $10 to $75, the remainder being paid by the district.

- TEACHING CLIMATE/PUPIL MORALE--All districts reported that participants exhibited a positive attitude throughout the program.

- TRANSPORTATION--Lack of transportation provided by the district was reported as a problem.

DIFFERENCES OR CONTRASTS

- SCHEDULING--Classes ranged from approximately one hour outside regular school hours to the equivalent of at least a 40-hour work week.

- COST--Per pupil expenditures ranged from $10 to $325.

- STUDENT IDENTIFICATION--Criteria for acceptance into the programs ranged from interest in learning about computers, as in the Vidor program, to a rigorous selection of both students and mentors in the Northside high school research program. The Northside program coordinated effort among 20 research departments, four high schools, 40 teachers, and five facilities to match students with mentors. Selections were based on the following criteria: academic performance, attitude toward others, initiative, leadership, dependability, cooperation, responsibility, ethical standards, appearance, conduct, and health.

  Both Garland's academic coach program and Northside's elementary science programs used interest surveys distributed to students and parents. Selection criteria for academic coaches were stringent and the positions highly competitive to encourage applications from the district's most successful teachers. Faculty were placed on an 11-month contract, eight hours daily.

  Irving recruited students for its field programs through use of a slide/tape presentation shown in selected biology, chemistry, and physics classes. Also required were three recommendations from faculty members, as well as academic prerequisites. Students in Garland's Basic Skills summer program were selected on the basis of compensatory education (Chapter 1) eligibility requirements.

- PROGRAM PHILOSOPHY--Since the majority of programs provided mathematics or science enrichment, rather than remediation, the majority of programs focused on maintaining the interest of students who already were highly motivated to learn. The stimulus for further enjoyment of these subjects was to provide students with atypical environments for their studies, whether it be the Big Bend National Park; the labs, scientists and physicians of The University of Texas Health Science Center at San Antonio; or the opportunity to work with computers and science equipment not ordinarily available to students at particular grades.

Northside's high school research program, for example, provided preprofessional experience in scientific research, treating students as equal members of research teams. Irving moved students into the field to study ecology, geology, taxonomy, and natural history to influence attitudes toward managing the earth's resources. Vidor provided enrichment for students already skilled in mathematics but somewhat apprehensive of using computers.

Garland's elementary remedial program provided a tuition-free summer school and transportation to improve basic and computer skills, build positive self-concepts, and develop positive attitudes toward school. Garland's academic coaching program, whether remedial or enriched, was a special tutorial open to all students to work with the district's best teachers outside regular school hours.

- METHODS OF INSTRUCTION--All programs to a lesser or greater degree involved students in laboratory activities. Northside's high school research students were assigned to labs to work either independently or with mentors. Students' responsibilities included keeping daily logs noting background information, procedures, and data. Students were given library, computer, lab, and parking privileges. Many attended conferences and workshops with their bosses and were guest speakers at faculty functions. Student attitudes and responsibility were considered equally as important as scientific skill and knowledge in the evaluations provided by research staff and the district's secondary science supervisor.

  Northside's elementary program, with its emphasis on learning for fun, stressed hands-on experimentation using chemicals readily found at home or school. Students kept notebooks and at the end of each class described two things they had learned that were new to them. The program also included three field trips and the grand finale, Science Olympics Day. Evaluation was informal.

  Irving students spent approximately two weeks in the classroom with course objectives achieved through lecture, discussion, and lab before a final week of field studies. Garland teachers combined short instructional periods with quick-paced, large-group instruction and individualized small-group instruction at learning centers. Centers were dedicated to reading, mathematics, computer-assisted instruction, communication skills, and self-image improvement. Courses in Garland's academic coach program ranged from Learning How to Learn, to mathematics and science labs, to SAT preparation. A variety of teaching methods for individual, small group, and whole class instruction was used. Vidor's Fun in Creative Computing program employed games, worksheets, computer programs, and art activities to provide enriched mathematics and computer literacy skills for participants.

OVERVIEW OF PILOT PROGRAMS

PROJECT	TITLE	GRADES	NO. OF STUDENTS	PROJECT LENGTH	PERSONNEL AND RESOURCES	FOCUS	SETTING
Garland ISD	Basic Skills	PK-5	317	3½ hours daily X 6 weeks	1 principal, 16 teachers, 6 aides; regular classrooms	. mathematics . remediation	. learning center
Garland ISD	Academic Coach	K-12	1,632	Approx. 1 hr. daily beyond regular school hrs., 5 days/ wk, 1983-4 yr.	31 coaches, regular classrooms	. mathematics . science . remediation . enrichment	. classroom
Irving ISD	. Big Bend Field Studies . Rocky Mountain Field Studies	7-12	34 (total)	3-4 weeks each	2 teachers each course; field studies	. science . enrichment	. classroom . lab . field
Northside ISD	. Science Smorgasbord . Kitchen Chemistry	5-6 each	47 (total)	1½ hours daily X 3 weeks each	1 teacher for each course; equipment from high schools	. science . enrichment	. lab . field
Northside ISD	Summer High School Research	9-11 each	34	40 hours weekly X 2½ months	mentors; medical institution	. science . enrichment	. lab
Vidor ISD	Fun in Creative Computing	5-6	20	Approximately 7 hours daily X 2 weeks	2 teachers; computer lab	. mathematics . enrichment	. lab

Fiscal Analysis

	Expenditure Per Pupil	State Funds Expended	Federal Funds Expended	*Local Funds Expended	Total Funds Expended
GARLAND ISD Basic Skills	$ 84	-0-	$ 26,842	-0-	$ 26,842
GARLAND ISD Academic Coaches	$ 141	-0-	-0-	$ 231,500	$ 231,500
IRVING ISD Science Summer Institute	$ 325	-0-	-0-	$ 11,082	$ 11,082
NORTHSIDE ISD Creative Activities	$ 34	-0-	-0-	$ 1,600	$ 1,600
NORTHSIDE ISD Summer High School Research	$ 10	-0-	-0-	$ 340	$ 340
VIDOR ISD Fun in Creative Computing	$ 90	-0-	-0-	$ 1,800	$ 1,800
TOTAL EXPENDITURES		-0-	$ 26,842	$ 246,322	$ 273,164

* Local funds include student tuition fees.

(accompanies Fiscal Analysis chart)

Per pupil expenditures ranged from a $10 fee for Northside ISD high school students (the cost of a research booklet and copy materials, only, since students worked on site at The UT Health Science Center) to a $325 tuition fee for Irving ISD high school students (costs related to students' field studies in the Rocky Mountains and in Big Bend National Park).

No state monies were used to fund programs. Also, no federal monies were used to fund programs, with the exception of the compensatory funds used to provide a tuition-free program for educationally disadvantaged students in Garland ISD's Basic Skills summer program.

Five of the six summer or after-school programs funded at least 90 percent of the programs through local monies. Garland ISD's Academic Coach program funded 31 teachers on an 11-month contract. The teachers tutored approximately 1,600 students five days per week throughout the 1983-84 school year.

Total expenditures for all six programs amounted to $273,164.

STRENGTHS AND WEAKNESSES

The following were the strengths and weaknesses reported by each of the pilot projects:

Strengths	Weaknesses
Garland ISD--Basic Skills Program	
. Use of learning centers provided more opportunities for small group and individual instruction. . Students and teachers exhibited positive attitudes. . There was increased teacher awareness of the needs of low-achieving students and of the conviction they can learn under the right circumstances. . Rewards for attendance, behavior, effort, and achievement provided positive reinforcement. . Strong community support via speakers, volunteer tutors, and donations was created. . Program had a favorable impact on student achievement.	. Testing procedures were not optimal. . More difficult concepts should have been introduced earlier. . Student dependence on bus transportation caused some problems with attendance and discipline. . Field trips were too long for the younger children. . There was insufficient teacher preparation time at the beginning of the program.
Garland ISD--Academic Coach Program	
. Majority of students felt their grades and test scores improved as a result of participating. . Eighty-five percent of the middle and high school students and 63 percent of the elementary students responding indicated they would probably take a similar course in the future. . Parents felt the program was beneficial and should be continued. . More time on task was provided for students needing remediation and reinforcement. . Opportunities for enrichment activities and challenges for students were created. . More time was provided for teachers to work individually with students. . Many students learned to study for the first time. . Students achieved increased self-confidence.	. Because courses could not be offered at every campus, parents had to provide transportation. . A need for better communication between academic coaches, regular teachers, parents, and administrators was felt. . High student attendance rate dropped toward end of school year. . Greatly increased workload for academic coaches created tendency toward "burnout," stress, and exhaustion. . Need for more academic coaches was noted. . In several cases, too many students per academic coach diminished potential of program. . No foreign language instruction was given. . No tangible rewards such as certificates were provided.

Strengths	Weaknesses
. Opportunities were created for students from different schools to meet and become friends. . Regular classroom teachers favored continuing the program. They felt that students enjoyed their classes and exhibited improved attitudes and grades.	
Irving ISD--Science Summer Enrichment Program . Students who participated have demonstrated a more positive attitude toward science and academics. . The program had a positive influence on the students' perceptions of the teacher as one who is dedicated and who cares. . Parent and student comments indicate the program contributed greatly to the self-confidence and social development of the students. . The opportunity to teach in a setting other than the traditional classroom heightened the spirit and enthusiasm of the teachers. . Response from community groups has been favorable toward future financial support.	. Student fees of $300-$400 each were prohibitive for many students. . The summer program schedule prohibited many students from participating because it conflicted with summer employment. . The volume of planning required by the program placed a heavy burden on staff time. . Academic prerequisites for participating in the program limited participation to the extent that it was not representative of the general student population.
Northside ISD--Creative Activities . Parents expressed overwhelming approval of the course. . The program had a positive effect on student attitudes toward science. . Support by top-level administration was given. . Community support was generated.	. Longer class periods are needed each day to allow for closure. . Students should be enrolled in both courses for better coordination of activities.

Strengths	Weaknesses
Northside ISD--Summer High School Research Program . Growth of student confidence in a professional laboratory setting was evidenced. . Opportunities were created for in-depth research in a medical laboratory and interaction with professional scientists. . Facilities, staff time, and equipment were provided by The University of Texas Health Science Center. . Ninety percent of the research students participated in local and regional science competitions. Two were national winners. . Valuable experience was gained for making career choices.	. Communication problems with professional researchers were noted. It was difficult for some to understand the abilities and limitations of high school students. . Many students cannot participate because the families depend upon money they receive from summer employment.
Vidor ISD--Fun in Creative Computing . Students and teachers exhibited positive attitudes. . Parents felt the program was beneficial and should be continued.	. Students were not formally evaluated since this was an enrichment program. . The tuition fee of $75 was prohibitive for many students. . Parents were responsible for transportation. . Classes were away from teachers' home campus.

GUIDELINES FOR THE EVALUATION OF
PILOT PROGRAMS FOR INSTRUCTIONAL PROGRAMS FOR SCIENCE AND MATHEMATICS

Districts are required to evaluate projects on a variety of aspects. These requirements were outlined in 19 TAC Chapter 77.24(d).

"Districts shall evaluate the pilot project and submit an evaluation report to the commissioner of education on or before a date specified by the commissioner. The evaluation shall include, but need not be limited to, the following:

(1) effect on student achievement;

(2) cost of the pilot program as compared to the regular program (including the cost of utilities, maintenance, transportation, salaries, and administration);

(3) attitude of students, teachers, and parents; and

(4) problems and successes encountered in the implementation of the program."

The following description of an evaluation document would address each section noted above:

Section 1: Effect on student achievement. A pre-post design could be developed with the pretest being the results from the spring achievement testing. This score (percentiles or NCEs) can then be compared to a posttest. Since the effect of this project may be motivational as well as directly academic in nature, two posttests are recommended. The first test should be given in early October. This may require some interpolation of normative information. The results will probably have to be hand scored so they can be reported to the Texas Education Agency by October 20 along with the remainder of the evaluation information. The second posttest would then be the regular testing given in Spring 1985. Immediate as well as long-term effects can then be ascertained. The long-term effects, of course, cannot be reported on the October 20, 1984, report to the Texas Education Agency.

Another approach, though less formal, would be to interview teachers concerning their opinions as to the increment in actual achievement that has been or will be evidenced as a result of the program.

Section 2: Cost of the pilot program. Recognizing that different time spans, utility costs, and other variables contrast this program from a regular one, the costs should first be reported directly. These costs then should be projected as they would be if the project did occur during the regular term. If there are aspects of the program that could not occur on a regular basis, they should be so noted. Costs that were not charged to the school district, i.e., parental contributions that added to the total cost of the project, should be included.

Section 3: Attitude of students, teachers, and parents. While numerous attitudinal surveys now exist, districts are encouraged to supplement (or replace) them with surveys that directly address the programs in question. Districts are also encouraged to administer the questionnaires at two times, as with the achievement testing, to determine longevity of effects. Typical points to be covered include:

- Was the activity enjoyable?
- Did the activity encourage cooperation between students and between students and teachers?
- Did the activity increase students' interest in science and mathematics?
- Did the activity make the student think more about a career in science or mathematics?
- Did the activity increase the overall motivation of students for all academic subjects?

These questions should be addressed to all students, their parents, and participating teachers.

Section 4: Problems and successes. This section is basically a narrative describing the problems encountered in planning or execution of the program. Successes should include overall impressions as well as selected "case studies" of exceptional student outcomes. This should not be done for every student, only for a select few. This section should also discuss the problems that might occur if the program were to be implemented on a continuing basis during the regular term. This should include comments as to the types of students participating in the program and the differences noted from the general student population in the district.

Basically, steps should be outlined that are required to transfer the program to the regular term. Activities that are and are not applicable should be noted.

APPENDIX A

Pilot Program Descriptions

GARLAND INDEPENDENT SCHOOL DISTRICT

Program Title: Basic Skills Program

Program Focus: Basic skills improvement in mathematics, reading, and writing.

Target Population: Basic skills instruction for 317 students, kindergarten-Grade 5, who qualify as educationally disadvantaged.

Goals/Objectives: To improve students' basic skills in mathematics, reading, and writing.

Activities: The program is based upon a six-weeks summer school program for students in kindergarten-Grade 5. Students are grouped by ability for small-group and individualized instruction in learning centers. Each student participates in a 120-minute morning or afternoon session each day.

Personnel: Principal, 16 teachers, and 6 aides.

Calendar: June 12-July 20, 1984
8-11 a.m. or 12:30-4 p.m.

Program Title: Academic Coach Program

Program Focus: Enrichment and remedial instruction in a variety of subject areas, including science and mathematics.

Target Population: Instruction in a variety of subjects for 1,632 students in kindergarten-Grade 12.

Goals/Objectives: To stimulate student interest and knowledge in a variety of subject areas by providing specialized instruction before and after regular school hours.

Activities: A staff of 31 academic coaches provide remedial and enrichment instruction for elementary, middle, and high school students before and after regular school hours in a variety of subject areas, including science and mathematics.

Personnel: A staff of 31 teachers.

Calendar: Sessions from 7-7:50 a.m. and 3:45-4:45 p.m. throughout the regular school year.

IRVING INDEPENDENT SCHOOL DISTRICT

Program Title: Science Summer Enrichment Program

Program Focus: Field studies of the topography, taxonomy, natural history, and geology of three major biomes: the desert, mountain, and marine and estuary environments.

Target Populations: Enrichment for 34 junior and senior high school students in the areas of life and earth science.

Goals/Objectives: To increase students' understanding of their unique place in nature and to broaden their awareness and appreciation of science as an interesting and practical discipline.

Activities: The program is organized around three summer science field study courses: Big Bend Field Studies, Rocky Mountain Field Studies, and Aquatic Field Studies. Each course represents a three- to four-week unit to enrich the student's life/earth science academic course work. The first two or three weeks of each course are devoted to classroom instruction and local laboratory and field activities. The final week of each course is devoted to the application of course work to field studies in the environment being studied.

Personnel: Two science teachers for each course.

Calendar: Big Bend Field Studies--June 4-23, 1984
Classroom phase: 8 a.m.-3:30 p.m. daily for two weeks

Rocky Mountain Field Studies--June 18-July 14, 1984
Classroom phase: 8 a.m.-12 noon daily for two weeks

Aquatic Field Studies--Plans are being made for the 1985-86 school year.

NORTHSIDE INDEPENDENT SCHOOL DISTRICT

Program Title: Science: Creative Activities in Northside

Program Focus: Laboratory-oriented summer science instruction for elementary students.

Target Population: Science enrichment activities for 47 Grade 5 and 6 students with high interest in science.

Goals/Objectives: To stimulate student interest and knowledge in science by providing opportunities to learn science by hands-on, laboratory-oriented activities.

Activities: The program is organized around two summer science courses, Science Smorgasbord and Kitchen Chemistry. Science Smorgasbord provides students with hands-on activities in the areas of biology, geology, chemistry, energy, and ecology. Resource speakers on weather, gems and lapidary work, and snake handling and care are also part of the course.

Kitchen Chemistry provides students with hands-on experiences with chemistry. Emphasis is placed on experiments using chemicals frequently found around the home. Students work with compounds/mixtures, acids/bases, and consumer product testing.

Classes in the two courses are combined for a Science Olympics Day and three field trips: a fossil hunt in the hill country, a visit to a planetarium and natural history museum, and a trip to the San Antonio Zoo.

Personnel and Resources: Two science teachers teach the two courses with support services from the central office staff. Existing facilities were used with equipment borrowed from a middle school and a high school.

Calendar: The program was in operation June 11-29, 1984. The daily schedule was 8:30 a.m.-10 a.m. and 10:15-11:45 a.m.

Program Title: Summer High School Research Program

Program Focus: To provide high school students the opportunity to do in-depth research at The University of Texas Health Science Center.

Target Population: Highly motivated science students in Grades 9-11 who are interested in medical or research careers. Participants must be willing to work for knowledge and experience--no salary--40 hours per week for two and one-half months in the summer. Thirty-four students from four high schools participated in the 1983-84 program.

Goals/Objectives: To stimulate the interest of high school students in science and engineering, to provide an educational preprofessional experience through participation in scientific research, to provide students an opportunity to interact with professional scientists, and to meet the individual needs of students by utilizing their time in a constructive way and providing potential opportunities for summer employment or scholarships.

Activities: Students selected for the program are matched with a mentor. Each student works a 40-hour week or more doing experimental research, keeping a daily log, and documenting their research. Students do an oral and written presentation on their research which has received local, state, and national recognition in various science competitions.

Personnel and Resources: The program is coordinated by the secondary science supervisor in cooperation with the director of secondary education, a liaison from The UT Health Science Center, and staff from 20 medical departments and five facilities of The UT Health Science Center. The medical institutions donate time and the use of equipment and facilities.

Calendar: The program has been in operation for three years. Students work 40 hours per week at The UT Health Science Center in San Antonio during June, July, and part of August. During the first week students meet daily with the science supervisor. The remainder of the summer there is a meeting with the science supervisor each week.

VIDOR INDEPENDENT SCHOOL DISTRICT

Program Title: Fun in Creative Computing

Program Focus: A summer enrichment class for elementary students using software designed to teach mathematics and computer literacy skills.

Target Population: Twenty students who completed Grade 5 or 6 in May 1984. Enrollment was open to all students from these grade levels.

Goals/Objectives: Students will be able to feel comfortable with the use of the computer at the end of the two-week program.

Fifty percent of the students will have 75 percent mastery of the computer vocabulary (terms) list they were given at the beginning of the course.

Activities: Students work with games, worksheets, computer programs, and art activities using computer terms.

Personnel and Resources: Two classroom teachers, one having attended training sponsored by Region V Education Service Center in computer literacy, and a computer lab on the junior high campus equipped with 10 Atari computers.

Calendar: The program was in operation June 4-15, 1984. The daily schedule, Monday-Friday, was 8 a.m.-2:45 p.m.

APPENDIX B

Chapter 13. Texas Education Code. Teachers

§ 13.117. Supplemental Contracts for Math and Science Teachers

(a) The legislature finds that the health of the economy of the state and the United States is increasingly dependent on public education to produce students possessing general and specific skills in mathematics and science. Public schools, in recent years, have encountered circumstances that have resulted in a decline in the number of students being prepared in math and science as well as the quality of preparation of those who are preparing for careers in math and science.

(b) It is the purpose of this subchapter to encourage local school districts to provide more and better quality science and mathematics instruction through the use of supplemental contracts for science and mathematics teachers to expand the opportunity for students to have more time on task by instituting summer programs and after-school studies and developing a system of competition for science and math students. Such expanded opportunities shall be for remedial, regular, and talented and gifted instruction. Therefore, local school districts are authorized and encouraged to establish such programs to increase both the numbers of students dedicated to the study of math and science and the quality and quantity of instructional time in both areas.

(c) The commissioner of education is authorized and directed to select school districts of various types to conduct pilot program studies to determine the most effective models for implementation of this program. Such pilot program studies shall be conducted during the 1984-85 biennium.

(d) The commissioner of education, upon completion of successful pilot program studies shall publish and disseminate to all school districts model programs to achieve the goals of this subchapter.

(e) The commissioner of education shall report the results of the pilot studies to the 69th Legislature and may make recommendations for the inclusion of such programs in the Foundation School Program.

(f) Local school districts may volunteer for the pilot studies and, if selected by the commissioner to participate, are authorized and encouraged to provide an amount of up to $5,000 as supplemental pay for each math and science teacher selected to participate in the pilot programs. Such funds shall be included in the participating teacher's regular payroll.

(g) The commissioner of education, if funds are available either through the Foundation School Program or through various regional service center grants or funds, may forward funds to the local participating districts in the pilot programs to assist in local funding of these programs. In addition, local school districts are encouraged to seek private funding, including foundation support to pursue the goals of the subchapter.

COMPLIANCE STATEMENT

TITLE VI, CIVIL RIGHTS ACT OF 1964; THE MODIFIED COURT ORDER, CIVIL ACTION 5281, FEDERAL DISTRICT COURT, EASTERN DISTRICT OF TEXAS, TYLER DIVISION

Reviews of local education agencies pertaining to compliance with Title VI Civil Rights Act of 1964 and with specific requirements of the Modified Court Order, Civil Action No. 5281, Federal District Court, Eastern District of Texas, Tyler Division are conducted periodically by staff representatives of the Texas Education Agency. These reviews cover at least the following policies and practices:

(1) acceptance policies on student transfers from other school districts;

(2) operation of school bus routes or runs on a non-segregated basis;

(3) nondiscrimination in extracurricular activities and the use of school facilities;

(4) nondiscriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning, or dismissing of faculty and staff members who work with children;

(5) enrollment and assignment of students without discrimination on the basis of race, color, or national origin;

(6) nondiscriminatory practices relating to the use of a student's first language; and

(7) evidence of published procedures for hearing complaints and grievances.

In addition to conducting reviews, the Texas Education Agency staff representatives check complaints of discrimination made by a citizen or citizens residing in a school district where it is alleged discriminatory practices have occurred or are occurring.

Where a violation of Title VI of the Civil Rights Act is found, the findings are reported to the Office for Civil Rights, Department of Health, Education and Welfare.

If there is a direct violation of the Court Order in Civil Action No. 5281 that cannot be cleared through negotiation, the sanctions required by the Court Order are applied.

TITLE VII, CIVIL RIGHTS ACT OF 1964; EXECUTIVE ORDERS 11246 AND 11375; TITLE IX, 1973 EDUCATION AMENDMENTS; REHABILITATION ACT OF 1973 AS AMENDED; 1974 AMENDMENTS TO THE WAGE-HOUR LAW EXPANDING THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967; AND VIETNAM ERA VETERANS READJUSTMENT ASSISTANCE ACT OF 1972 AS AMENDED IN 1974.

It is the policy of the Texas Education Agency to comply fully with the nondiscrimination provisions of all federal and state laws and regulations by assuring that no person shall be excluded from consideration for recruitment, selection, appointment, training, promotion, retention, or any other personnel action, or be denied any benefits or participation in any programs or activities which it operates on the grounds of race, religion, color, national origin, sex, handicap, age, or veteran status (except where age, sex, or handicap constitute a bona fide occupational qualification necessary to proper and efficient administration). The Texas Education Agency makes positive efforts to employ and advance in employment all protected groups.